

COUNTRY ANALYSIS BRIEFS

Chad and Cameroon

Last Updated: December 2005

Background

Both Chad and Cameroon have seen strong economic growth in recent years.

Chad had the world's fastest growing economy in 2004, registering real gross domestic product (GDP) growth of 31.0 percent. In 2005, real GDP growth was 10.1 percent. Foreign investments into Chad and petroleum exports via the Chad-Cameroon pipeline were the primary driving forces behind the considerable economic growth. Forecasts of output decline from the Doba Basin oil fields have brought the 2006 forecast for real GDP growth down to 6.0 percent. Even with high economic growth, nearly 80 percent of Chad's population continues to live by subsistence farming.



Cameroon's economy has exhibited steady economic growth since the mid 1990's. Real GDP growth for 2005 was 3.0 percent, down from 3.5 percent in 2004. The decrease was primarily due to declines in oil production. In 2006, real GDP growth is forecast at 4.3 percent. Cameroon's agricultural sector helped mitigate declines in GDP during 2005. The International Monetary Fund (IMF) has encouraged Cameroon to seek increases in non-oil revenues, which the agricultural sector has accomplished. The IMF has also indicated its desire to help Cameroon by funding a Poverty Reduction and Growth Facility (PRGF) for the country, as well as other debt relief programs.

Chad and Cameroon belong to the six-member Central African Economic and Monetary Union (CEMAC). CEMAC was created in 1991 in an effort to improve economic and political cooperation in the region. Participants in CEMAC share a central banking system operated by the Bank of the Central African States (BEAC). A common currency known as the Communauté Financière Africaine franc, or simply the CFA franc, is used within CEMAC, making it easier to trade among members. However, benefits have been minimized due to weak infrastructure and poor implementation of CEMAC policies. Both Chad and Cameroon face economic challenges such as dependence on the oil sector, increasing inflation and high levels of poverty. Trade diversification, adherence to tighter fiscal policy and poverty reduction measures are aimed at addressing these challenges.

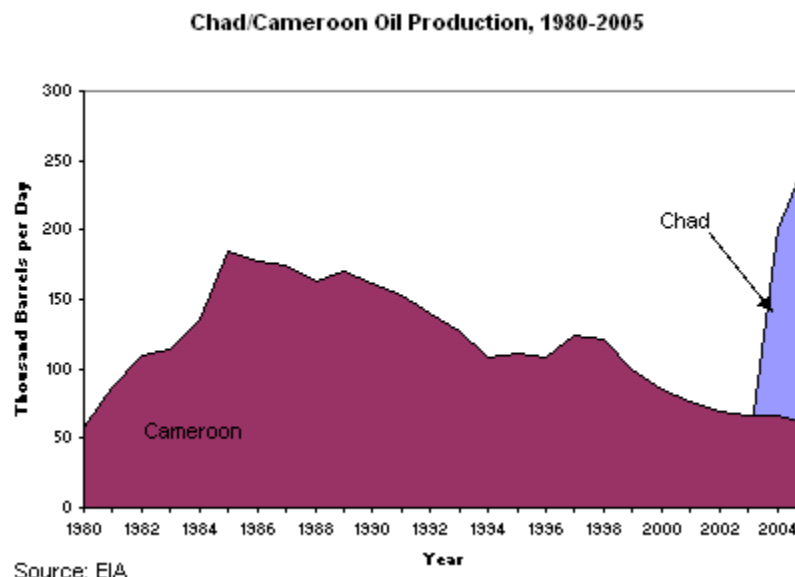
Oil

Chad's oil production has grown rapidly since the completion of the Chad-Cameroon pipeline.

According to *The Oil and Gas Journal* (OGJ), Cameroon had proven oil reserves of 400 million barrels as of January 2005. The majority of Cameroon's reserves are located offshore in the Rio del Rey basin of the Niger Delta. Less significant reserve deposits are located in Douala/Kribi-Camp basins off Cameroon's western coast, and onshore in the northern Logone-Birni basin.

There is a dispute between Cameroon and Nigeria over the Bakassi Peninsula, which contains additional proven reserves. According to the *BP Statistical Review of World Energy June 2005*, Chad has proven oil reserves of 900 million barrels.

In 2005, Chad produced approximately 249,000 barrels per day (bbl/d) and Cameroon produced 60,000 bbl/d. Oil production was non-existent in landlocked Chad prior to 2003, but with the completion of the Chad-Cameroon pipeline in July 2003, the country began producing oil. Since then, Chad's production levels have climbed steadily. Cameroon's production has fallen over the same time period. Production levels in 2005 were almost 30 percent lower than 2000 production levels. One reason for Cameroon's declining oil production has been a lack of new fields being brought online over the past two decades. A second reason is the declining production rates at currently producing fields.



In 2005, Chad and Cameroon were easily able to meet their total combined oil demand of 25,000 bbl/d from domestic production. In addition, the two countries were net exporters of petroleum. Oil exported from Chad is transported via the Chad-Cameroon pipeline, which ends at Cameroon's Kribi terminal.

Sector Organization

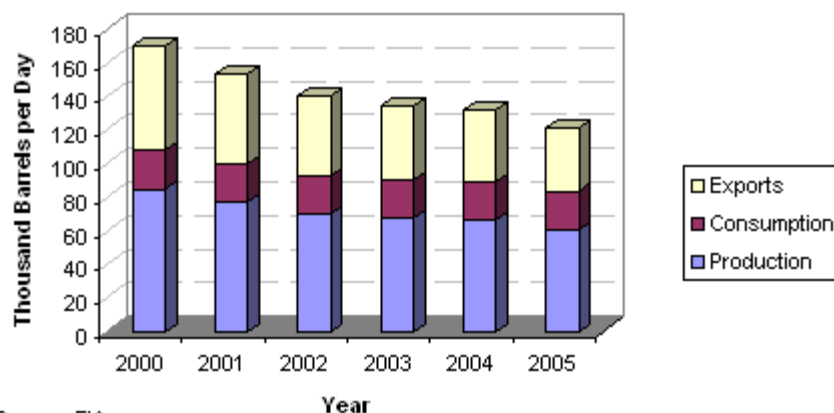
Chad and Cameroon have been in the process of restructuring their oil sectors by developing laws and regulations that encourage investment within the sector. In Chad, the government has revised its Code for Oil Production. This revision allows for production sharing agreements (PSA) between foreign companies and the Chadian government. The Cameroonian government revised its petroleum laws to include financial incentives and tax breaks on exploration in both 1999 and 2002.

During 2005, the Chadian government began looking at ways to restructure the country's oil revenue management laws. Currently, 10 percent of oil revenues are set aside to fund social programs for future Chadian generations. The government desires to change the law, so that the revenues can be used to finance current social projects. The government is also seeking to increase oil revenues used for the country's operating costs by 15 percent.

Exploration and Production

Chad's Doba basin consists of three major fields: Bolobo, Komé and Miandoun. A consortium led by ExxonMobil began test drilling in the Doba basin in 2001. In October 2003, the first oil from Doba basin arrived at the port of Kribi. In December 2004, new oil and gas exploration permits were awarded by the Chadian government to Canada's Energem Petroleum Corporation. The permits are for the Chari-Ouest basin, located near the Doba basin and Largeau basin, located in central and northern Chad, respectively.

**Cameroon's Oil Production, Consumption and Exports,
2000-2005**



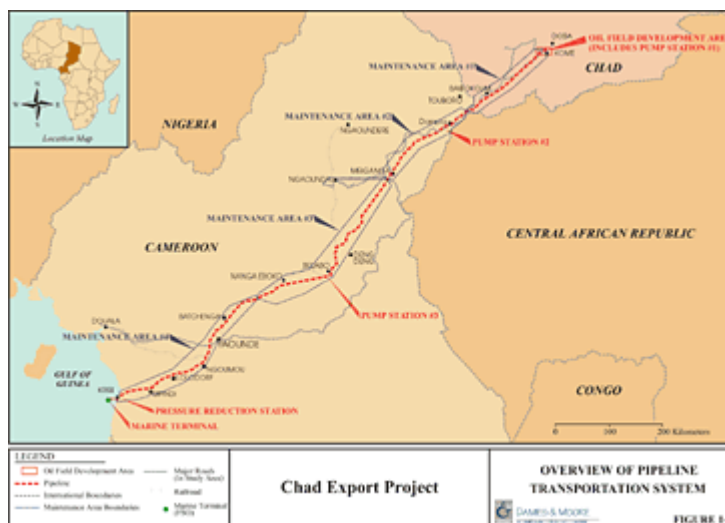
Source: EIA

Cameroon's oil production has been in steady decline since 1997. Although the country has been well explored, Cameroon's state oil company, the National Hydrocarbons Company (SNH), believes that discovery and development of smaller fields is possible. Renewed interest in oil investment has led to exploration in all three of Cameroon's major petroleum basins -- Logone Birni, Douala and Rio del Rey. SNH, which Cameroon has committed to privatize, engages in exploration and production in conjunction with several Western oil companies. In May 2005, Total was awarded the Dissoni exploration block located in the offshore Rio del Rey basin. Total is the operator of the block, with a 50 percent ownership stake.

Chad-Cameroon Pipeline

Since Chad is landlocked, the country's petroleum production depends on its ability to access international markets through the [Chad-Cameroon pipeline project](#). The pipeline runs 670 miles from Doba basin through Cameroon's Logone Birni basin to the port of Kribi. Eighty-five percent of the pipeline is located in Cameroon. The pipeline's capacity is estimated at 225,000 bbl/d. Export facilities in Kribi include an onshore-pressure reducing station and a subsea pipeline connected to a floating production storage and offloading vessel (FPSO). The Tchad Oil Transport Company (TOTCO) and the Cameroon Oil Transport Company (COTCO) have respective ownership of each country's portion of the pipeline.

The Chad-Cameroon Pipeline



Source: Esso Exploration & Production Chad, Inc.

The total cost of development and construction of the Chad-Cameroon pipeline and export facilities has been estimated at \$3.5 billion. The World Bank's approval of the project, a prerequisite for a \$93 million loan to fund each country's government stake in the project, was essential in securing the support of outside countries. Chad is the first country to accept a conditional loan from the World Bank based on oil-revenue spending restrictions. The country's Petroleum Revenues Management Law (PRML), adopted in 1999 as a prerequisite for World Bank financing, outlines the planned allocation of new oil revenues. Eighty percent of Chad's oil revenues are to be allocated to health, education, rural development, environmental concerns, and other social services. The remaining 20 percent is divided between government expenditures (15 percent) and a supplement to the Doba region (5 percent).

Chad is expected to receive \$3.5 billion in oil revenues during the first ten years of exports, increasing annual government revenues by more than 50 percent. Recent high oil prices have increased Chadian revenues. Cameroon will earn an estimated 46 cents on every barrel of oil transported through the pipeline.

Refining

Chad's downstream oil sector is completely dependent on petroleum products imported from Nigeria and Cameroon. Nearly all commercial energy needs in Chad are satisfied by petroleum products. Local companies control 35 percent of petroleum distribution and marketing in Chad, followed by Shell and Total. Taiwan's Chinese Petroleum Corporation (CPC) has expressed an interest to invest an estimated \$100 million in oil development projects in Chad to strengthen the relations between the two countries.

Cameroon's only refinery, operated by the Société Nationale de Raffinage (SONARA), is located in the port city of Limbe and has a production capacity of 42,000 bbl/d. Most of Cameroon's heavy crude oil is exported, while light oil processed in the refinery is imported from Nigeria and Equatorial Guinea. Newly upgraded port facilities now allow tankers with capacity as large as 90,000 deadweight tons (Aframax) to access the refinery. Total, ExxonMobil, ChevronTexaco, and Shell market refined products within Cameroon. The petroleum products are distributed domestically by the Cameroon Petroleum Depot Company (SCDP).

Natural Gas

Cameroon is looking to develop its 3.9 Trillion cubic feet (Tcf) of natural gas reserves.

According to *The Oil and Gas Journal* (OJG), Cameroon has natural gas reserves of 3.9 trillion cubic feet (Tcf). The majority of the natural gas is located in the Rio del Rey, Douala and Kribi-Campo basins. In 2004, Syntroleum Corporation began talks with Cameroon over a proposed joint venture with Euroil. The companies planned to develop the 600 billion cubic feet (Bcf) Sanaga Sud natural gas field located in the Douala/Kribi-Campo basins. In addition, Syntroleum studied the feasibility of developing a gas-to-liquids (GTL) plant in Cameroon. The projects are still in the discussion stage. Currently, Cameroon utilizes natural gas to enhance oilfield performance and generate in-field electricity.

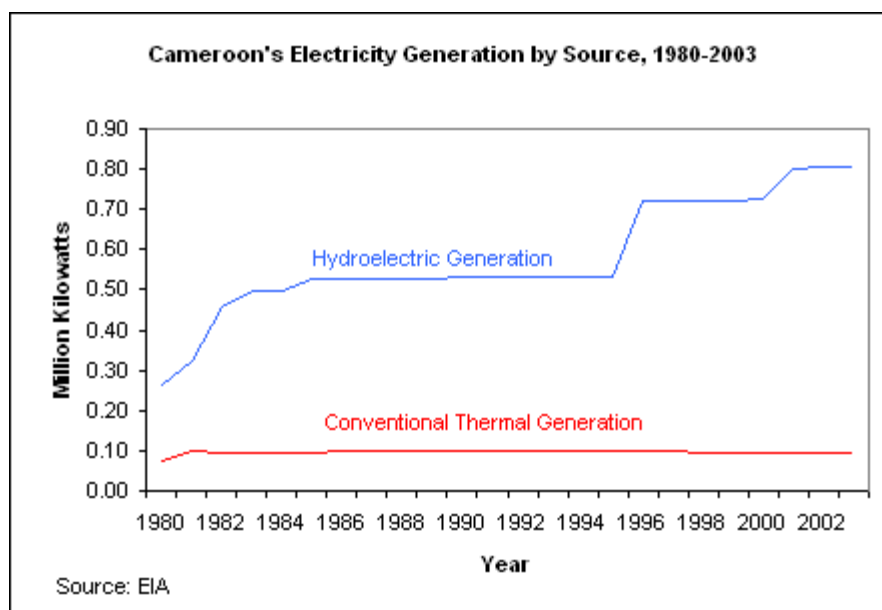
Chad has no proven natural gas reserves.

Electricity

The majority of people in Chad and Cameroon use biomass as their primary energy source, due in large part to a lack of access to electricity.

As of January 2003, Chad had 30 megawatts (MW) of installed generating capacity, of which 100 percent was conventional thermal. In 2003, the country generated 0.12 billion kilowatt hours (Bkwh) of electricity, while consuming 0.11 Bkwh. Generation and consumption of electricity in Chad have increased by 0.03 Bkwh since 1990. The small increase is due to a lack of investment in the electricity sector. Only a small portion (2 percent) of Chad's population has access to electricity. The vast majority of Chadians rely on biomass fuels such as wood and animal dung.

In 2003, Cameroon had installed electric generation capacity of 900 MW, of which 90 percent was hydroelectric and 10 percent was conventional thermal. Cameroon generated 2.89 Bkwh of electricity in 2003, while consuming 2.78 Bkwh.



Sector Organization

In 2001, US-based AES Corporation purchased a majority stake in Cameroon's state-run, Société Nationale d'Electricité (SONEL). Since then, AES-SONEL has managed Cameroon's power generation and distribution to around 500,000 people. Most of Cameroon's population does not have access to electricity, while those who do are often subject to brownouts. AES-SONEL implemented a plan to invest \$500 million to improve Cameroon's electrical infrastructure. The completion of an 85-MW, oil-fired plant at Limbe, in August 2004, marked the first step in the electricity network improvements. AES-SONEL has additional plans to build hydroelectric plants, as well as Cameroon's first natural gas-fired plant at Kribi. The Kribi facility is expected to be operational by 2007. In October 2003, AES-SONEL and the government adopted a new electricity tariff structure to reduce electricity costs for residential customers.

AES-SONEL and Électricité de France (EDF) have conducted studies concerning a Chad-Cameroon interconnector project.

Generation and distribution of electricity in Chad are handled by the state-run Société Tchadienne D'eau et D'électricité (STEE).

Hydroelectricity

Cameroon's two main hydroelectric stations, Edea and Song-Loulou, are located on the Sanaga River, while the smaller Lagdo station is located near Garoua. In the future, successful development of Cameroon's hydroelectric potential could make the country a net electricity exporter. However, Cameroon's heavy reliance on hydroelectric power leaves its electricity sector extremely vulnerable to droughts. Cameroon relies on approximately 30 aging diesel power stations as back-up facilities, the largest of which are located in Garoua (20 MW), Douala (15 MW), and Yaounde (11 MW).

Cameroon continues to study the Lom Pangar Dam project. Construction on the dam has yet to occur as environmental impact studies are currently ongoing. The Cameroonian government, in conjunction with AES-SONEL, expects completion of the dam by 2008, but a delayed start will most likely postpone the completion date.

Conventional Thermal

Conventional thermal capacity comprises all of Chad's power supply. Four generators, which are fueled by oil imported from Nigeria and Cameroon, make up the country's only major power station (22 MW). The plant is located in N'Djamena, where approximately nine percent of households have electricity. The high cost of importing petroleum to fuel power generation makes Chad's electricity prices among the highest in the world. World Bank loans to develop the electricity sector have focused on sustainable energy (\$5.3 million) and equipment refurbishment (\$55 million).

Additional efforts to increase electricity generation in Chad have not made much progress. Attempts to utilize oil from the Sedigi field in electricity generation have been unsuccessful, partly due to a malfunctioning pipeline between Sedigi and N'Djamena. In the short-term, both Libya and France have provided generators to increase Chadian electricity supply, and Libya has offered to export electricity to the country.

Profiles

Country Profile								
Country	Chief of State	Location	Independence	Population 2005E		Capital City		
Chad	President: Idriss Deby	Central Africa, south of Libya	August 11,1960	9.8 million		N'Djamena		
Cameroon	President: Paul Biya	Western Africa, between Equatorial Guinea/Nigeria	January 1,1960	16.4 million		Yaounde		
Economic Profile								
Country	Minister of Economy	Gross Domestic Product (GDP),2004 \$Billions	Real GDP Growth Rate, 2005E	Per Capita- GDP, 2004E	Inflation Rate, 2005E	Exports 2005E \$Billions	Imports 2005E \$Billions	Current Account Balance 2005E \$Millions
Chad	Mahamat Ali Hassen	\$15.7	10.1%	\$1,600	3.8%	\$0.4 (2004E)	\$0.5 (2004E)	\$330.2 (2004E)
Cameroon	Polycarpe Abah Abah	\$30.2	3.0%	\$1,900	2.5%	\$3.6	\$2.6	-\$485.0
Energy Profile								
Oil		Proven Reserves (1/1/05E)	Production (2005E)	Consumption (2005E)		Net Exports (2005E)		
		Billion barrels	Thousand barrels per day (bbl/d)					
Chad		0.9	250	2		248		
Cameroon		0.4	60	23		37		
Total		1.3	310	25		285		
Natural Gas		Proven Reserves (1/1/05E)	Production (2005E))	Consumption (2005E)		Net Exports (2005E)		
		Trillion cubic feet (Tcf)	Billion cubic feet (Bcf)					
Chad		0	0	0		0		
Cameroon		3.9	0	0		0		
Total		3.9	0	0		0		
Electricity		Installed Capacity (2003E)	Generation (2003E)			Consumption (2003E)		
		Gigawatts (GW)	Billion kilowatthours (Bkwh)					
Chad		0.03	0.12			0.11		
Cameroon		0.9	2.89			2.79		
Total		0.93	3.01			2.90		

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

EIA Links

[EIA - Country Information on Chad](#)

[EIA - Country Information on Cameroon](#)

U.S. Government

[CIA World Factbook - Chad](#)

[Library of Congress Country Studies - Chad](#)

[U.S. State Department Consular Information Sheet - Chad](#)

[U.S. State Department: Human Rights Report - Chad](#)

[CIA World Factbook - Cameroon](#)

[U.S. State Department Background Notes - Cameroon](#)

[U.S. State Department Consular Information Sheet - Cameroon](#)

[U.S. State Department: Human Rights Report - Cameroon](#)

Associations and Institutions

[World Bank Chad-Cameroon Project](#)

[World Bank Country Brief: Chad](#)

[World Bank Country Brief: Cameroon](#)

[International Monetary Fund \(IMF\): Chad](#)

[International Monetary Fund \(IMF\): Cameroon](#)

Oil and Natural Gas

[Esso Exploration and Production Chad, Inc.](#)

Sources

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BP Statistical Review of World Energy June 2005

CIA World Factbook 2004

Economist Intelligence Unit ViewsWire

Global Insight

International Monetary Fund

International Oil Daily

Oil and Gas Journal

Petroleum Intelligence Weekly

Platt's Oilgram News

Reuters News Service

U.S. Energy Information Administration

World Bank

World Markets Analysis

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